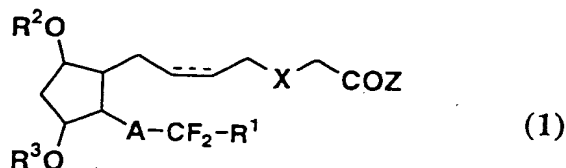


WHAT IS CLAIMED IS:

1. A fluorine-containing prostaglandin derivative of the following formula (1) or a salt thereof:



wherein A is an ethylene group, a vinylene group, an ethynylene group, $-\text{OCH}_2-$ or $-\text{SCH}_2-$,

A

R^1 is a ~~substituted or unsubstituted C_{3-8} alkyl~~ group, a substituted or unsubstituted C_{3-8} alkenyl group, a substituted or unsubstituted C_{3-8} alkynyl group, a substituted or unsubstituted C_{3-8} cycloalkyl group, a substituted or unsubstituted aralkyl group or a substituted or unsubstituted aryloxyalkyl group,

15 each of R^2 and R^3 which are independent of each other, is a hydrogen atom or an acyl group, or forms a single bond together with Z,

X is $-\text{CH}_2-$, $-\text{O}-$ or $-\text{S}-$,

20 Z is $-\text{OR}^4$, $-\text{NHCOR}^5$, $-\text{NHSO}_2\text{R}^6$ or $-\text{SR}^7$, or forms a single bond together with R^2 or R^3 ,

each of R^4 , R^5 , R^6 and R^7 which are independent of one another, is a hydrogen atom, an alkyl group, an alkenyl group, an alkynyl group, a cycloalkyl group, an aryl group or an aralkyl group,

25 and a dual line consisting of solid and broken lines is a single bond, a cis-double bond or a trans-double bond.

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2. The compound according to Claim 1, wherein A is an ethylene group or a vinylene group.
3. The compound according to Claim 1, wherein X is $-\text{CH}_2-$.
- 5 4. The compound according to Claim 1, wherein both R^2 and R^3 are hydrogen atoms.
5. The compound according to Claim 1, wherein Z is $-\text{OR}^4$.
6. The compound according to Claim 1, wherein R^1 is a substituted or unsubstituted aryloxyalkyl group.
- A 10 ²7. The compound according to Claim ¹6, wherein R^1 is a phoxymethyl group, a 3,5-dichlorophoxymethyl group or a 3-chlorophoxymethyl group.
- ³8. The compound according to Claim 1, which is 16-phenoxy-15-deoxy-15,15-difluoro-17,18,19,20-tetranorprostaglandin $\text{F}_{2\alpha}$, 16-(3-chlorophenoxy)-15-deoxy-15,15-difluoro-17,18,19,20-tetranorprostaglandin $\text{F}_{2\alpha}$, 16-phenoxy-15-deoxy-15,15-difluoro-13,14-dihydro-17,18,19,20-tetranorprostaglandin $\text{F}_{2\alpha}$ or an alkyl ester or a salt thereof.
- 20 ⁴9. A medicine containing the compound according to Claim 1 as an active ingredient.
- ⁵10. The medicine according to Claim ⁴9, which is a preventive or therapeutic medicine for an eye disease.
- ⁶11. The medicine according to Claim ⁵10, wherein the eye disease is glaucoma or ocular hypertension.
- 25 ⁷12. The medicine according to Claim ⁴9, ⁵10 or ⁶11, wherein A is an ethylene group or a vinylene group.

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